IN THE SPECIFICATION:

The specification as amended below with replacement paragraphs shows added text with underlining and deleted text with ~~strikethrough~~.

Please AMEND the paragraph beginning at page 1, line 3 as follows:

Nuclear Magnetic Resonance (NMR) and specifically Magnetic Resonance Imaging (MRI) is the established imaging method of choice for many types of clinical diagnosis due to its exemplary soft tissue definition. Conventional whole body imaging systems generally use a superconducting solenoid or Helmholtz-type coil pair ("C Magnet") to generate the required strong and uniform static magnetic field (called the B0 field). Patients undergoing examination lie within the bore of the solenoid or between the poles of the C-magnet. It is becoming increasingly desirable to monitor the progress and results of surgical procedures, such as biopsy and intravascular ~~catheterisation~~catheterization using MR imaging. This process is often called' interventional MRI, or I-MRI techniques. Surgeons have restricted access to patients within conventional MRI apparatus, particularly solenoid magnets; this has hampered the widespread application of I-MRI techniques.

Please AMEND the paragraph beginning at page 2, line 11 as follows:

A further related technology is monitoring the position of catheters within the patient's body using imaging. Commonly used techniques are X-ray fluoroscopy and ultrasound. X-ray fluoroscopy is particularly suitable for real-time imaging, as the catheter material has quite different X-ray absorption to tissue and is readily apparent in the images. Monitoring catheter position using MRI is more difficult because the catheter generates no measurable MR signal (only NMR signals from liquid sources are measured by conventional MRI hardware), and is therefore only visible by its contrast when immersed in tissue generating high NMR signal. Furthermore, whilst video-rate MR images are possible, they demand high-specification hardware, so real time catheter tracking using MRI is difficult. However, MRI has several advantages for tissue imaging compared to X-ray (see below) and it is often only necessary to take "snap-shots" of catheter position at certain critical stages of the surgical operation. These include using the susceptibility artefact created by the catheter to make it visible (i.e.: detecting local distortion of the B0 field) (for example US 6, 332, 088, and C.J.G. Bakker, R.M. Hoogeveen, J. Weber, J.J. van Vaals, M.A. Viergever, W.P.Th.M. Mali, "MR-guided endovascular interventions: susceptibility-based catheter and near real-time scan technique", Radiology 202, 273-276, 196.), and embedding tuned RP coils in the catheter tip. (eg: US 6,289,233).

Please AMEND the paragraph beginning at page 3, line 3 as follows:

As previously mentioned, MRI is often the preferred method for monitoring the progress of surgery compared to X-ray and ultrasound. There are several reasons for this, including: no ~~ionising~~ionizing radiation (so theatre staff do not have to wear protective heavy lead clothing, which is particularly important for intricate brain or cardiac operations which may last several hours); MRI generates an undistorted 3D image (rather than a projection, with no depth information in the case of X- ray); MRI allows far better soft tissue ~~characterisation~~characterization and differentiation; MRI methods exist to monitor changes in tissue integrity, based on diffusion, perfusion and/or flow: for example MRI techniques exist to monitor temperature, (which is particularly useful during thermal tissue ablation or cryosurgery), cell populations and cell chemistry; subsequent MR images directly show changes caused by inflammation; internal bleeding, thrombosis, organ motion or the direct results of surgery, etc.; MRI contrast agents can also be used to highlight tissue changes ' (for example, this can be used to confirm that all of a malignant ~~tumour~~tumor has been removed before completing the operation). In ~~specialised~~specialized cases useful spectroscopic information can also be obtained from the MR image.

Please AMEND the paragraph beginning at page 9, line 12 as follows:

It is not a strict requirement to reverse the current to the same absolute level when flowing in the opposite direction - the correction coils could simply be ~~turfed~~turned off, or the current simply reduced. The former option would reduce the stored energy to 0.7MJ during the pre-magnetization period, but there would only be a 2.7 fold enhancement in field and NMR signal. However, there are good technical reasons for preferring to have the current rise to the same absolute level but flowing in the opposite sense in the pre-polarization period compared to the read-out period: the stored energy in both pre-polarization and read-out modes with reversed but equal-magnitude current is the same, so choosing any lower current value means that energy will have to be removed, stored for the duration of the imaging sequence, which could be a few seconds, then added back into the magnet. This is inconvenient: 0.1MJ of energy would halve to be stored in the example above. Resonant switching of the current using a capacitor; as described above, is the most convenient way of rapidly reversing the current to the same value, and temporarily storing the energy in the capacitor bank during the short change-over period TS. This is described in more detail in WO 02/56047.